Delivering health sciences and medicine online: Does live quizzing translate well to digital teaching?

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With the mode of delivery rapidly switching from face-to-face instruction to online learning in many institutions, it is important to identify teaching tools that can be effectively translated from one mode to the other. Interactive online polling has been employed during live face-to-face sessions to assist in assessing student progress and understanding, as well as to enhance the overall learning experience. This study investigated the effectiveness of using interactive polling, designed for face-to-face instruction, with students learning in online-only classes. 150 participants studying health sciences and medicine utilised Kahoot! in either face-to-face or online during live sessions, and their experiences and perceptions were recorded. Overall, students enjoyed the online polling platform, with no significant differences between those studying online or face-to-face. This study presents online polling as a suitable method of instruction that is not impacted by the mode of delivery in a health sciences and medical course.

Keywords: Online teaching; live quizzing; Kahoot!; medical education; health sciences education

Introduction

The recent shift from traditional pedagogical practices to active, often remote learning, has challenged tertiary educators to utilise teaching techniques that promote student engagement (Moro, Smith & Stromberga, 2019). Formative assessment in the form of in-class quizzes can provide students the opportunity to practice their knowledge and skills in a safe environment. The live quizzing platform, Kahoot! has demonstrated potential in the tertiary classroom environment across multiple disciplines such as medicine, nursing and dentistry. The aim of this study was to evaluate health sciences and medical student perceptions of using the live quizzing platform Kahoot! as a teaching tool in both face-to-face and online remote delivery classes.

Methods

A total of 150 first and second year health sciences and medical students from an Australian university volunteered to participate in this study. The study compared two groups: face-to-face delivery of content (72 participants) and online delivery of content (78 participants). Participants initially undertook an online quiz based around the online or face-to-face session content using the Kahoot! platform. At the conclusion of the session, participants completed a Likert scale questionnaire related to their experiences and provided qualitative responses regarding their perceptions of using the polling platform.

Results

Participants in both the face-to-face and online learning groups rated their learning experience using live quizzing highly across all four domains. There were no significant differences (Student's two-tailed *t*-test) between the experiences when Kahoot! online quizzing was presented during either an online or face-to-face session.

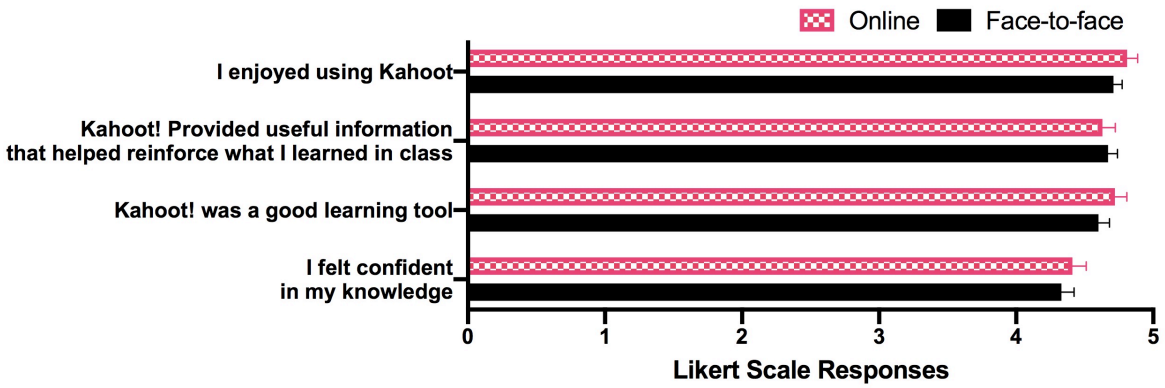

Figure 1: Likert scale responses for face-to-face or online delivery of content. Reported as mean±SD where 1=strongly disagree and 5=strongly agree.

Discussion

This study identifies online polling as a method of instruction that can easily transition between face-to-face or online teaching sessions. Tools for assessment and content revision such as this can be embedded into courses regardless of their method for presentation. As many health sciences and medical schools are currently split between online, face-to-face or mixed-mode curricula, it is important to find teaching tools that are rapidly and easily transferrable between the various modes of delivery.

References

Moro, C., Smith, J., & Stromberga, Z. (2019). Multimodal Learning in Health Sciences and Medicine: Merging Technologies to Enhance Student Learning and Communication. In P. M. Rea (Ed.), *Biomedical Visualisation : Volume 5* (pp. 71-78). Cham: Springer International Publishing.